subel

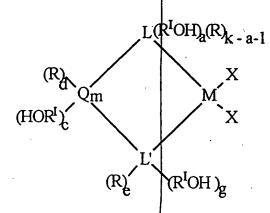
1. (amended twice) A heterogeneous catalytic component obtained by reacting a porous inorganic support with a metallocene compound, wherein the metallocene compound is defined by formula I, II, or III:

 $(LR_k)_z[LR_{k-f}(R^lOH)_f]MX_y$

I,

 $\begin{array}{c} L(R^IOH)_a(R)_k - a-1 \\ X \\ (HOR^I)_c \\ X \\ L(R^IOH)_b(R)_k - b-1 \end{array}$

 \mathbb{T} , or



wherein:

the L groups are equal to or different from each other, wherein each L is selected from the group consisting of: cyclopentadienyl, indenyl, tetrahydroindenyl, fluorenyl, octahydrofluorenyl, and benzoindenyl;

-3-

each $\bf R$ is independently hydrogen, linear or branched C_1 - C_{20} alkyl, linear or branched C_3 - C_{20} cy ϕ loalkyl, linear or branched C_6 - C_{20} aryl, linear or branched C_3 - C_{20} alkenyl, linear or branched C_7 - C_{20} arylalkyl, linear or branched $C_7^{\dagger}-C_{20}$ alkylaryl, linear or branched C_8-C_{20} arylalkenyl, or a group SiR^{II}_3 , wherein the C_1-C_{20} alkyl, the C_3-C_{20} cycloalkyl, the Q_6-C_{20} aryl, the C_3-C_{20} alkenyl, the C_7 - C_{20} arylalkyl, the C_7 - C_{20} alkylaryl, and the C_8 - C_{20} arylalkenyl are optionally substituted with 1 to 10 halogen atoms;

the $\mathbf{R^{I}}$ groups are equal to or different from each other, wherein each RI is a divalent alighatic or aromatic hydrocarbon group containing from 1 to 20 carbon atoms, optionally containing from 1 to 5 heteroatoms of groups 14 to 16 of the Periodic Table of the Elements, and optionally containing boron;

each Q is independently B, C, Si, Ge, or Sn;

M is a lanthanide, an actinid ϕ , or a metal of group 3, 4, or 10 of the Periodic Table of the Elements;

each \mathbf{X} is independently hydrogen, chlorine, bromine, OR^{II} , NR^{II}_{2} , C_{1} - C_{20} alkyl, or C_{6} - C_{20} aryl

each $\mathbf{R^{II}}$ is independently linear or branched $\mathbf{C_1}\mathbf{-C_{20}}$ alkyl, linear or branched C_3-C_{20} cycloalk ψ 1, linear or branched C_6-C_{20} aryl, linear or branched C_3-C_{20} alkenyl, linear or branched C_7-C_{20}

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arylalkyl, linear or branched C7-C20 arylalkenyl, or linear or
branched C_7-C_{20} alkylaryl;
    L' is N or 0;
    when L is cyclopentadien 1, k is equal to 5; when L is
indenyl, k is equal to 7; when L is fluorenyl or benzoindenyl, k
is equal to 9; when L is tettrahydroindenyl, k is equal to 11; and
when L is octahydrofluorenyl, k is equal to 17;
     z is equal to 0, 1, or 2;
     \mathbf{x} is equal to 1, 2, or 3;
     y is equal to 1, 2, or 3;
     x + y + z is equal to a valence of M;
     m is equal to 1, 2, 3 \phir 4;
     a is an integer whose \forallalue ranges from 0 to k-1;
     b is an integer whose \sqrt{alue} ranges from 0 to k-1;
     f is an integer whose value ranges from 1 to \mathbf{k};
     g is equal to 0 to 1;
     c is equal to 0 or 1;
     e is equal to 0 or 1;
     \mathbf{a} + \mathbf{b} + \mathbf{c} is at least 1;
     \mathbf{a} + \mathbf{g} + \mathbf{c} is at least 1;
     d is equal to 0, 1, or 2;
     when Q is B, then c + d = 1;
     when \mathbf{Q} is C, Si, Ge, or Sn, then \mathbf{c} + \mathbf{d} = 2;
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5 Ub E4

5. (amended three times) A heterogeneous catalytic component according to claim 1 wherein the inorganic support is previously treated with alumoxane or trialkylaluminum.

when $\mathbf{L'}$ is N, then $\mathbf{g} + \mathbf{e} = 1$; and when $\mathbf{L'}$ is O, then $\mathbf{g} = 0$ and $\mathbf{e} = 0$.

cub ES

6. (amended twice) A heterogeneous catalytic component obtained by reacting an alumoxane or a trialkylaluminum with a metallocene

compound defined by formula I, II, or III:

sub E5

 $(LR_k)_z[LR_{k-f}(R^IOH)_f]_xMX_y$

I,

L(R^IOH)aR)k-a-1

HORI C L (RIOH) (R) k - b-1

IJ, or

L(RIOH)a(R)k - a-1

(HOR^I), M

5

(R^IDH)_g

wherein:

the **L** groups are equal to or different from each other, wherein each **L** is selected from the group consisting of: cyclopentadienyl, indenyl, tetrahydroindenyl, fluorenyl, octahydrofluorenyl, and benzoindenyl;

each ${\bf R}$ is independently hydrogen, linear or branched C_1 - C_{20} alkyl, linear or branched C_3 - C_{20} cycloalkyl, linear or branched C_6 - C_{20} aryl, linear or branched C_3 - C_{20} alkenyl, linear or branched C_7 - C_{20} arylalkyl, linear or branched C_7 - C_{20} alkylaryl, linear or branched C_8 - C_{20} arylalkenyl, or a group ${\rm SiR^{II}}_3$, wherein the C_1 - C_{20} alkyl, the C_3 - C_{20} cycloalkyl, the C_6 - C_{20} aryl, the C_3 - C_{20} alkenyl, the C_7 - C_{20} arylalkyl, the C_7 - C_{20} alkylaryl, and the C_8 - C_{20} arylalkenyl are optionally substituted with 1 to 10 halogen atoms;

the $\mathbf{R}^{\mathbf{I}}$ groups are equal to or different from each other, wherein each $\mathbf{R}^{\mathbf{I}}$ is a divalent aliphatic or aromatic hydrocarbon group containing from 1 to 20 carbon atoms, optionally containing from 1 to 5 heteroatoms of groups 14 to 16 of the Periodic Table of the Elements, and optionally containing boron;

each Q is independently B, C, Si, Ge, or Sn;

M is a lanthanide, an actinide, or a metal of group 3, 4, or 10 of the Periodic Table of the Elements;

each ${\bf X}$ is independently hydrogen, chlorine, bromine, OR^{II}, NR^{II} $_2$, C $_1$ -C $_{20}$ alkyl, or C $_6$ -C $_{20}$ aryl;

each $\mathbf{R^{II}}$ is independently linear or branched C_1 - C_{20} alkyl, linear or branched C_3 - C_{20} cycloalkyl, linear or branched C_6 - C_{20} aryl, linear or branched C_3 - C_{20} alkenyl, linear or branched C_7 - C_{20} arylalkyl, linear or branched C_7 - C_{20} arylalkenyl, or linear or